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CANADIAN HYMENOPTERA-No. 2.

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COLEOCENTRUS CANADENSIS, n. sp.

Female.—Length, 20 mm. Black, with red legs. Head transverse, as wide as thorax; cheeks as wide as eyes; face slightly swollen below antennæ, clothed with short pubescence, and with the inner orbits faintly yellowish below; palpi and inner edges of mandibles and labrum rufous; vertex and cheeks polished, the area of the ocelli without noticeable depressions or sutures; antennæ long and moderately thick, the joints about forty and subsequal. Thorax polished above; the lobes of the mesothorax prominent, the central sulcate; pleuræ and pectus rugose or subaciculate, but without definite striæ; scutellum moderately large and elevated; metathorax with acute carinæ; the area enclosed by the two discal carinæ about twice as long as wide; in the area enclosed by the two lateral carinæ the elongate spiracle may be plainly seen almost in centre; the areas between lateral and discal carinæ transversely rugose; legs slender with robust coxæ, entirely rufous with exception of hinder tibiæ and tarsi, which are somewhat brownish; wings faintly yellowish, stigma and nervures brown, areolet small, triangular and pedicellate, receiving the recurrent nervure at outer angle. Abdomen sessile, robust, brown rather than black: first segment twice as long as wide, not much expanded posteriorly, faintly sulcate above, with indistinct lateral carinæ; remaining segments shorter, subequal, margined at apex (except last) with pale yellow; the terminal segment compressed and curved so as to partly embrace the ovipositor; ventral scale very large, partly covering three apical segments; ovipositor as long as body, piceous, the sheaths piceous black, very finely pubescent.

Captured at Casselman, about thirty miles south-west from Ottawa, on the 26th June, 1883.

I have much pleasure in describing this insect, as the species of Coleocentrus are rare in collections. All the American forms have been described from Canada, and so far these insects seem to have been found, with one exception, only in our territories.

During a visit to Sudbury, on the 16th of last June, with Mr. Fletcher, we were so fortunate as to take five examples of the fine species described by Mr. Cresson in Vol. I., page 35, of the Canadian Entomologist, and named after Mr. Pettit. I find no record of its occurrence during the score of years which has since elapsed, and the two females taken by Mr. Fletcher and the three males which I secured are therefore highly prized. The females were flying near the ground among the fallen timber, upon which they were also seen to alight, and in addition to those captured two or three escaped owing to the rough nature of the ground. The males were hovering about bushes, and were not at first recognized as belonging to this genus, as they differ so much in the shape of the abdomen and in method of flight. A female was also taken by Mr. Evans during our stay with him. As the male has not been described, if indeed previously captured, I append its description in such characters as it differs from the female.

COLEOCENTRUS PETTITII, Cress.

Male.—Length, 17 to 20 mm. Black, shining. Face below antennæ, scape of antennæ beneath and palpi yellow. Antennæ black, nearly as long as the body, the joints both longer and more numerous than in φ . Legs varying slightly in colour but much paler than those of φ ; the anterior and middle legs, including the tips of coxæ, are almost yellow, as also the posterior tarsi; posterior femora and tibiæ pale rufous, with a more or less defined black stripe down the tibiæ behind. Abdomen slender and compressed laterally, as in some Ophionids; the first segment much narrower than in the φ ; the apex of the last dorsal segment shaped as in φ .

The posterior tibiæ of the females are not black as in the specimen described by Cresson, but rufous or brownish with a black line externally, as in the \mathcal{J} .

Our species may be tabulated as follows:—

Head, thorax and abdomen mostly rufous...... C. rufus, Prov. Head and thorax black; abdomen black or brownish.

ad and thorax black; abdomen black or brownish.

Antennæ black.

Of the above species, *occidentalis* is recorded from Vanc. Island, and has been taken in California by Mr. Koebele; *mellipes* from the Rocky Mountains; *rufus* from Quebec (?), and *Pettitii* and *Canadensis* from Ontario.

Another fine genus of the Pimplinæ is Ecthrus, the species of which in general appearance much resemble those of Coleocentrus. The females, however, may be readily distinguished by the absence of the large ventral scale, and by their inflated anterior tibiæ. The shape of the areolet and of the last dorsal segment of the abdomen will separate the males.

ECTHRUS RUFOPEDIBUS, n. sp.

Female. Length, 20 mm. Black, with red legs. Head entirely black; face rugosely punctured and opaque; cheeks and vertex polished, but distinctly punctate; labrum and mandibles polished; palpi black; antennæ long and slender; third, fourth, and fifth joints long, subequal, a white annulus extending from middle of sixth joint nearly to apex of tenth. Thorax immaculate; lobes of mesothorax prominent, polished and punctate, as is also scutellum; pleura and metathorax coarsely rugosely sculptured, posterior transverse carina of metathorax distinct, but areas of disc not clearly defined; wings sub-hyaline, nervures and stigma black, areolet large, pentagonal; coxæ, trochanters and femora rufous, front tibiæ inflated, white, their tarsi almost rufous, middle tibiæ and tarsi brownish, the posterior tibiæ and tarsi black. Abdomen stout, basal segments strongly punctured, the first without distinct carinæ; ovipositor as long as body, rufous, sheaths black, scarcely pubescent.

This fine species was captured by Mr. Winn at Montreal on the 14th June, 1890.

I have prepared the following table for convenience in separating the twelve species of the genus.

FEMALES.

| Wings smoky | E. ? maurus, Cress | |
|---------------|--------------------|--|
| Wings banded. | | |
| I ama mufaus | E = 0.1222 + 0.000 | |

Legs rufous E. nubilipennis, Cress.
Legs black E. luctuosus, Prov.

| Wings hyaline, or subhyaline. | | |
|---|---------------------------------|--|
| | E. abdominalis, Cress. | |
| | E. Provancheri, Prov. | |
| | E. pediculatus, Prov. | |
| Abdomen black. | , | |
| Antennæ brown, anterio | or coxæ blackE. rubripes, Prov. | |
| Antennæ black, anterior coxæ red E. nigricornis, Prov | | |
| Antennæ annulate with white. | | |
| Ovipositor long. | | |
| Legs black | | |
| Legs red | | |
| Ovipositor short. | | |
| First abdomin | al segment carinate, | |
| E. annulicornis, Walsh. | | |
| First abdominal segment not carinate, | | |
| | E. canadensis, Prov. | |
| MALI | | |
| | E. abdominalis, Cress. | |
| Abdomen black. | | |
| _ | E. niger, Cress. | |
| Legs red | E. nigricornis, Prov. | |

Two of the species are described from the United States, viz., annulicornis from Illinois and nubilipennis from the Rocky Mountains in Colorado. Ottawa has furnished two, viz., niger and abdominalis communicated to Mr. Cresson by the late Mr. Billings, and described in CAN. ENT., Vol. I., page 37. Of the former of these, niger, I have taken 4 9 and 1 3, and have found the female ovipositing in decaying maples in June. Provancher also records this species from St. Hyacinthe, Que. The second, abdominalis, I have not succeeded in finding here yet, but I was so fortunate as to take a fine female at Sudbury on the occasion of the visit already mentioned. I have also received this species from Rev. G. W. Taylor, of Victoria, B.C., and his specimen agrees in every particular with that from Sudbury. The species maurus (doubtfully referred to this genus by Cresson) was described from Victoria, and Provancheri was also obtained by Mr. Brodie from Vancouver. The species now described, rufopedibus, is from Montreal, and the remaining species, all described by Provancher, are presumably also from the Province of Quebec.